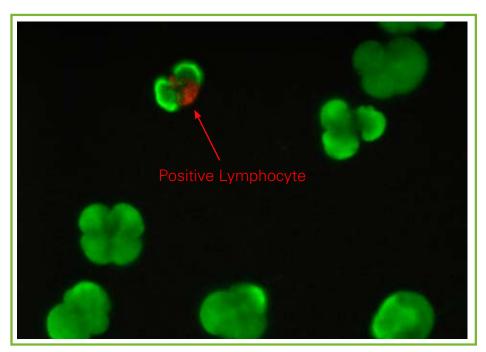
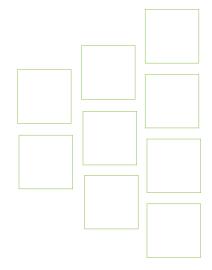
# **True P-ANCA?**

## How would you know?





ANCA-L with positive lymphocytes

If you were using the innovative ANCA-L Test System from Immuno Concepts, you would be able to tell if you had the potential of ANA interference with the P-ANCA pattern. By including higher numbers of lymphocytes in the cell suspension, you now have the ability to detect potential underlying ANA interference in the initial view of the fluorescent ANCA ETOH test.

### **ANCA-L Advantages**

- Lymphocytes provide an additional tool to check for ANA interference
- Sample Diluent reduces non-specific fluorescent staining
- Positive and negative controls are ready-to-use
- Titratable controls are included
- Well spacing is compatible with multi-channel pipettes
- Moat around the wells reduces cross-contamination

Routinely developing innovative products that simplify your life.



#### Reading and Reporting

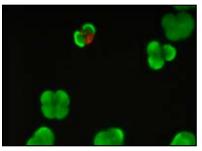
Antineutrophil cytoplasmic autoantibodies (ANCA) are a group of antibodies that react with cytoplasmic antigens in human neutrophils. Although these antibodies were originally reported in 1964 (1), the first report linking these antibodies to disease was in 1982, when Davies et al reported the antibodies in eight patients with segmental necrotizing glomerulonephritis (2). In 1984, four more patients with vasculitis and glomerulonephritis were reported. In 1985, van der Woude et al showed that ANCA had a high association with Wegener's granulomatosis, and that antibody titer correlated with disease activity (3). In 1988, Falk and Jennette reported that ANCA have more than one antigen specificity (4). A subsequent report showed that the specificity of ANCA correlated with the pathologic features of vasculitides (5).

In the immunofluorescent test for ANCA, several patterns of cellular staining may be seen. Two major patterns of staining have been described and well characterized when ethanol-fixed neutrophils are used in the immunofluorescent ANCA test. Autoantibodies that show a fine granular cytoplasmic pattern, called C-ANCA, are usually directed against a serine protease, Proteinase 3 (PR3). These autoantibodies have been shown to have a high association with Wegener's granulomatosis. The other major pattern of staining, the perinuclear, or P-ANCA pattern, which is usually due to antibodies directed against myeloperoxidase (MPO), has been associated with systemic vasculitis and idiopathic necrotizing and crescentic glomerulonephritis (4). The P-ANCA pattern is an artifact induced by the use of ethanol as a fixative (4). If the neutrophils are fixed in formalin, myeloperoxidase (the major antigen responsible for the P-ANCA pattern in ethanol fixed cells) remains associated with the primary (alpha) granules, and shows a granular cytoplasmic distribution. Proteinase 3 (PR3) remains associated with the primary (alpha) granules in either ethanol or formalin fixatives.

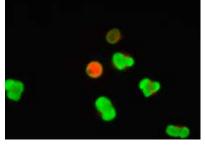
Anti-nuclear antibodies (ANA) in the sample can stain the nuclei of the neutrophils. In some cases, especially anti-DNA antibodies, the staining can resemble a P-ANCA pattern. However, with the new ANCA-L substrate, staining of the lymphocyte nuclei indicates the presence of ANA.(6).

#### BIBLIOGRAPHY

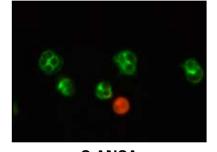
- 1. Faber, V., Elling, P., Norup, G., et al. An Antinuclear Factor Specific for Leucocytes. Lancet 2:344-345, 1964.
  2. Davies, D.J., Moran, J.E., Niall, J.F., et al. Segmental Necrotising Glomerulonephritis with Antineutrophil Antibody: Possible Arbovirus Aetiology? Br. Med. J. 285:606, 1982.
  3. van der Woude, F.J., Rasmussen, N., Lobatto, S., et al. Autoantibodies Against Neutrophils and Monocytes: Tool for Diagnosis and Marker of Disease Activity in Wegener's Granulomatosis. Lancet 1:425-429, 1985,
- 4. Falk, R.J., Jennette, J.C. Antineutrophil Cytoplasmic Autoantibodies with Specificity for Myeloperoxidase in Patients with Systemic Vasculitis and Idiopathic Necrotizing and Crescentic Glomerulonephritis. N. Engl. J. Med. 318:1651-1657, 1988.
- 5. Jennette, J.C., Wilkman, A.S., Falk, R.J. Antineutrophil cytoplasmic autoantibody-associated glomerulonephritis and vasculitis. Am. J. Pathol. 135:921-930, 1989.
  6. Savige, J., Gillis, D., Benson, E., et al. International consensus statement on testing and reporting of antineutrophil cytoplasmic antibodies (ANCA). Am. J. Clin. Pathol. 111:507-513, 1999.



P-ANCA with positive ANA



P-ANCA with negative ANA



C-ANCA

Ordering information:		
Fluoresent Tests		Slides x Wells
10070L-11	ANCA-L Ethanol Fluorescent Test System	10 x 7
10140L-11	ANCA-L Ethanol Fluorescent Test System	10 x 14
10070-12	ANCA Formalin Fluorescent Test System	10 x 7
10140-12	ANCA Formalin Fluorescent Test System	10 x 14
7095-15	RELISA® MPO Test System	96 wells
7096-16	RELISA® PR3 Test System	96 wells

